

***Safety-Critical Real-Time Systems***. Edited by Bernd Krämer and Norbert Völker. Kluwer Academic Publishers, Boston, MA. (1997). 306 pages. \$85.00, NLG 185.00, GBP 56.25.

Contents:

Editorial (Bernd Krämer). A systematic approach to the Petri net based specification of concurrent systems (Antonino Mazzeo, Nicola Mazzocca, Stefano Russo and Valeria Vittorini). A highly dependable computing architecture for safety-critical control applications (Bernd Krämer and Norbert Völker). The ProCoS approach to correct systems (Hans Langmaack). Building large, complex, distributed safety-critical operating systems (Horst F. Wedde and Jon A. Lind). Contributing authors.

***Encyclopaedia of Mathematics: Supplement Volume I***. Edited by M. Hazewinkel. Kluwer Academic Publishers, Dordrecht. (1997). 587 pages. \$295.00, NLG 495.00, GBP 179.00.

***The Theory of Learning in Games***. By Drew Fudenberg and David K. Levine. MIT Press, Cambridge, MA. (1998). 276 pages. \$29.95.

Contents:

Series foreword. Acknowledgments. 1. Introduction. 2. Fictitious play. 3. Replicator dynamics and related deterministic models of evolution. 4. Stochastic fictitious play and mixed-strategy equilibria. 5. Adjustment models with persistent randomness. 6. Extensive-form games and self-confirming equilibrium. 7. Nash equilibrium, large population models, and mutations in extensive-form games. 8. Sophisticated learning. Index.

***Protecting Networks with SATAN***. By Martin Freiss. O'Reilly, Sebastopol, CA. (1997). 112 pages. \$19.95.

Contents:

Foreword. Preface. 1. Security. 2. Installing SATAN. 3. Security audits. 4. Scan results and countermeasures. 5. Extending and adapting SATAN. 6. Detecting and repelling SATAN attacks. 7. Beyond SATAN. Appendix A. Further reading. Index.

***Term Rewriting and All That***. By Franz Baader and Tobias Nipkow. Cambridge University Press, New York. 301 pages. \$49.95.

Contents:

Preface. 1. Motivating examples. 2. Abstract reduction systems. 3. Universal algebra. 4. Equational problems. 5. Termination. 6. Confluence. 7. Completion. 8. Gröbner bases and Buchberger's algorithm. 9. Combination problems. 10. Equational unification. 11. Extensions. Appendices. 1. Ordered sets. 2. A bluffer's guide to ML. Bibliography. Index.

***Probabilistic Modelling***. By Isi Mitrani. Cambridge University Press, New York. (1998). 223 pages. \$64.95 (hardback); \$24.95 (paperback).

Contents:

Preface. 1. Introduction to probability theory. 2. Arrivals and services. 3. Queueing systems: Average performance. 4. Queueing networks. 5. Markov chains and processes. 6. Queues in Markovian environments. Index.

***Lectures on Proof Verification and Approximation Algorithms***. Edited by Ernst W. Mayr, Hans Jürgen Prömel and Angelika Steger. Springer, Berlin. (1998). 344 pages. \$45.00, DM 68.00, öS 497.00, sFr 62.00, GBP 26.00.

Contents:

Introduction. 1. Introduction to the theory of complexity and approximation algorithms (Thomas Jansen). 2. Introduction to randomized algorithms (Artur Andrzejak). 3. Derandomization (Detlef Sieling). 4. Proof checking and non-approximability (Stefan Hougardy). 5. Proving the PCP-theorem (Volker Heun, Wolfgang Merkle and Ulrich Weigand). 6. Parallel repetition of MIP(2,1) systems (Clemens Gröpl and Martin Skutella). 7. Bounds for approximating MAXLINEQ3-2 and MAXEkSAT (Sebastian Seibert and Thomas Wilke). 8. Deriving non-approximability results by reductions (Claus Rick and Hein Röhrig). 9. Optimal non-approximability of MAX-CLIQUE (Martin Mundhenk and Anna Slobodová). 10. The hardness of approximating set cover (Alexander Wolff). 11. Semidefinite programming and its applications to approximation algorithms (Thomas Hofmeister and Martin Hühne). 12. Dense instances of hard optimization problems (Katja Wolf). 13. Polynomial time approximation schemes for geometric optimization problems in Euclidean metric spaces (Richard Mayr and Annette Schelten). Bibliography. Author index. Subject index. List of contributors.

***Integral, Probability, and Fractal Measures***. By Gerald A. Edgar. Springer, New York. (1998). 286 pages. \$39.95.

Contents:

Preface. 1. Fractal measures. 2. Integrals. 3. Integrals and fractals. 4. Probability. 5. Probability and fractals. References. Notation. Index.